affected by the agency of the alkalies, but only by some acids, since the potassium of the cyanide is not able to displace the oxide of iron, becoming oxidized at its expense, and setting the metal free, as occurs with the other ferruginous preparations. Considering that we find in the blood albumen, soda in excess, and iron, and having shown how these three bodies, by simple direct contact, form a soluble salt, the chemical combination of which is so powerful that it is not destroyed by the most delicate reagent, may we not fairly infer that the iron exists in the blood as an albuminate of iron and soda? and would it not, therefore, be reasonable to administer iron in the various diseases in which it is prescribed, principally in reference to the state of the sanguineous system, in the form of albuminate, as that in which nature itself has placed it within our organism—one of the products, so to speak, on which our life depends? Physicians have been long puzzled, and are still at a loss, how to administer iron, a valuable remedy, in the manner most suitable to the internal organism; hence the great number of preparations of this metal. Some object to its saline combination with mineral acids, on the ground that these are inorganic, and they prefer giving it in the metallic or oxidized state, leaving the acids of the stomach to form with it compounds which may be carried into the circulation. Others, unwilling to run the risk of having the greater part of the iron—little or not at all acted upon—expelled with the feces, prescribe it in the same state, but combined with organic vegetable acids; hence we have the malate, tannate, citrate, etc., of iron. Others, still more scrupulous, wish to have it united to acids of an animal nature, and prefer the lactate, the cyanide, etc.; M. Fabri would recommend its employment in the state of albuminate of iron and soda.—*Chemical News.*

8. *Arsenite of Cafeine and Tanno-Arsenic Acid used as Antiperiodics.*—M. Gastinel, Professor at the School of Medicine of Cairo, has presented to the Egyptian Institute two new arsenical compounds—viz., arseniate of cafeine and tanno-arsenic acid, both perfectly crystallized, and having a well-defined chemical constitution. M. Schnepf, sanitary physician at Alexandria, has lately studied the therapeutical action of these two compounds, and the following are some of the cases which he has recorded. The first case was that of a man, forty-five years old, who had just had two paroxysms of fever. A cathartic and emetic were first given, and produced vomiting and purging; then on the next morning he took twenty centigrammes of tanno-arsenic acid in some water, in doses of one centigramme every quarter of an hour. This was on the day when the paroxysm was expected to return, but it was almost entirely absent, the patient complaining, however, of a little frontal headache. The dose was repeated on the two following days, and there was no return of the fever, and after a short time the patient entirely recovered. In another case the patient was a man about forty years old, attacked with a tertian fever. On the day when the fever was absent he took twenty centigrammes of tanno-arsenic acid. The paroxysm did not return on the following day, and the arsenical compound was continued for two days longer. The patient complained of loss of appetite for a few days, but soon recovered entirely. The third case was that of a man fifty years old, suffering from a quotidian fever. The first attack surprised him suddenly in a violent manner, and was attended with great prostration. The next day an emetic was administered, but the paroxysm returned. After the remission, on the third day, twenty centigrammes of the tanno-arsenic acid were given, and the paroxysm did not return, although some headache remained, with wandering pains in the stomach. Twenty centigrammes more were given, and the fever never reappeared, but there remained a prolonged dislike for food, and a painful sensation at the epigastrium. Gradually, however, the appetite returned, and the man became quite well.—*Brit. and For. Med.-Chirurg. Rev.*, Jan. 1863, from *Gazette des Hôpitaux*, Jan. 1862.

9. *Action of Digitalis.*—Dr. Fuller, in his recent work on "Diseases of the Chest," asserts that the general notion that digitalis exercises a depressing influence over the action of the heart, and therefore leads to accumulation and

coagulation of the blood in its cavities, if not actual paralysis of its muscular structure, is erroneous. On the contrary, he affirms that digitalis stimulates the muscular fibres of the heart, and augments the contractility of the capillaries; that when it kills, it is not by paralysis, but by tonic contraction and spasm of the heart; that, such being the case, it is a valuable remedy in dilatation, and dangerous only when administered in hypertrophy. The grounds given by Dr. Fuller for these opinions are those stated by the author (p. 592):—

"1st. During many years, I have observed that the cases of heart disease most benefited by digitalis have been those in which the heart has been weak and dilated, and the pulse feeble and irregular. In these the pulse has become stronger and steadier, and less frequent under its action.

"2d. In the only cases in which I have known death to occur suddenly during the administration of digitalis, the heart has been hypertrophied and firmly contracted. This may have been a coincidence, but, viewed in connection with the results of experiments to which I shall presently refer, it is, at least, a suspicious fact.

"3d. Dr. Dickenson has pointed out (*Med.-Chir. Trans.*, vol. xxxix.), and I have repeatedly verified his observations, that digitalis, if given in full doses, induces violent uterine contraction, and checks uterine hemorrhage; and, inasmuch as its action in staying menorrhagia and uterine hemorrhage is permanent, it seems fair to conclude that it gives tone to the capillaries, and increases their contractility.

"4th. This view is borne out by what I have long since observed relative to its action in arresting hæmoptysis, viz., that, whilst effecting the object required, it does not weaken but rather increases the force of the pulse, though it lessens its frequency.

"5th. When patients die of delirium tremens, the pulse is usually rapid and fluttering before death, and the heart is found weak, flaccid, and distended with blood afterwards. These are just the cases in which, on the commonly-received doctrines as to the action of digitalis, the drug ought necessarily to prove fatal, and yet modern experience has shown that in these cases it is tolerated, even in excessive doses. My impression is, that its remedial action in these cases depends on its stimulating the heart, subduing its irritability, and increasing the tonicity and contractility of the heart and capillaries, so that the brain is better supplied with blood, and the effusion of its more fluid parts, which gives rise to the 'wet brains' of habitual drunkards, is avoided.

"6th. It has been proved by experiments on animals (Dr. H. Jones) that when death is induced by digitalis, the heart is not flaccid and distended with blood, as is commonly supposed, but, on the contrary, empty, contracted to the utmost, and in a state of tonic spasm. All these facts confirm my view as to the action of digitalis; and if it is correct, its practical importance in relation to the treatment of cardiac dilatation can hardly be over-estimated."

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10. *Internal Exhibition of Atropia and of Strychnia.*—Dr. ALEXANDER FLEMMING recommends (*Edinburgh Med. Journal*, January, 1863) solutions of atropia and of strychnia for internal use, as being safer and more efficient than the Galenical preparations of belladonna and nux vomica.

The solutions of both alkaloids which he employs are so proportioned in strength that ten minims (by measure) is the ordinary commencing dose.

This solution of atropia is made thus: "Atropiæ, 1 grain; distilled water, 5 drachms. Dissolve *thoroughly* with the aid of a few drops of diluted muriatic acid, and add of rectified spirit sufficient to make 10 drachms. This solution keeps well, and is of uniform strength. The tincture and extract of belladonna, however carefully prepared, vary much in power. I have found the tincture of one chemist seven times the strength of the same preparation from another and equally respectable chemist; and the extract is even more uncertain. The internal, and at the same time efficient, use of these preparations is for this reason very unsafe.

"The solution is so proportioned that 10 minims, containing 1-60th of a grain of atropia, is the commencing dose for the adult. It should be given in a little water, once daily, at bedtime, and on an empty stomach. The dose is increased